

**RAC II REGION 5 STATEMENT OF WORK  
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY OVERSIGHT**

**Former MGP sites in Chicago, Illinois**

**May 12, 2012**

**Statement of Work Revision No. 2**

**April 12, 2013**

**CONTRACT NO: EP-S5-06-01**

**INTRODUCTION**

**PURPOSE**

The purpose of this work assignment is to conduct oversight of the potentially responsible party's (PRP's) remedial investigation/feasibility study (RI/FS) at 11 former manufactured gas plants (MGPs) located in Chicago, Illinois (see attached list of sites) to select a remedy to eliminate, reduce, or control risks to human health and the environment. The current work assignment initially addresses six of the 11 sites. Specifically, the RI/FS oversight involves the investigation and study of contaminants of concern at the subject MGP sites. This statement of work (SOW) sets forth the framework and requirements for this effort. The goal is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and then to use this data to result in a well-supported Record of Decision (ROD). The purpose of Revision No .1 to the SOW revision is:

- Add Throop Street site to the list of facilities included in this work assignment;
- Extend the period of performance from March 2013 to April 2014;
- Revise the assumptions under Subtasks 1.2 and 1.5 as well as Task 3 and Task 6..

**The purpose of Revision No .2 to the SOW revision is:**

- **Add Hough Place to the list of facilities included in this work assignment;**

**SITE DESCRIPTION**

MGPs were industrial facilities that produced gas from coal, oil, and other feedstocks. MGPs started operating in the U.S. in the early 1800s, typically in urban areas where gas was needed for lighting, cooking, and heating. The processes used to produce the gas also produced waste and by-products such as tars, purifier waste, oils, sludges, and acidic waste. The following descriptions are provided for each MGP site covered under this work assignment:

**Chicago MGP Sites (8)**

**Hawthorne Station Former MGP (SSID: B5HN)**

The Hawthorne Avenue Former MGP Gas Storage site is located on the northwest corner of the intersection of Marcey Street and Willow Street in Section 32, Township 40 North, Range 14 East in the City of Chicago, Cook County, Illinois. The site, which is approximately 4.1 acres in size, is bounded on the northwest by Wisconsin Street (formerly Clay Street), on the southwest by Kingsbury Avenue (formerly Hawthorne Avenue, now a railroad right-of-way), on the southeast by Willow Street, and on

the northeast by Marcey Street. This property is occupied by three small buildings that house the operations of the Hawthorne Regulator Station, a natural gas regulating station with intermittent maintenance activities. The northwestern portion of the site is currently owned by Commonwealth Edison and used as a transformer station and equipment storage yard. The southeastern portion of the site is currently owned by Marcey Properties, LLC (Marcey) and used for retail purposes (Smith and Hawken and Sam's Wines and Spirits). The Marcey property includes approximately 1.6 acres of land that was formerly part of the Willow Street Station Former MGP site. Because of their common current ownership, the portion of the Willow Street Station Former MGP site located east of the railroad is addressed as part of the Hawthorne Avenue MGP site. The North Branch of the Chicago River is approximately 375 feet west of the site. The site is zoned for manufacturing and there are no residential properties in the immediate vicinity. Land use in the area surrounding the site is primarily industrial and commercial.

The Ogden Gas Company constructed the Hawthorne Avenue Gas Storage Facility in 1905 for use as a manufactured gas distribution facility. The facility included a water-sealed 5 million cubic foot gas holder located at the corner of Wisconsin and Marcey, as well as a compression tank and a number of buildings (shop, boiler house, exhaustor house, garage, chimney and pipe shed). Peoples Gas leased the property from Ogden Gas in 1907, gained control of portions of the company in 1913, and acquired the Ogden Gas Company's remaining assets when Ogden Gas dissolved in 1950. The Hawthorne Avenue gas holder was retired in 1958 and dismantled the following year. Peoples Gas began selling portions of the former Gas Storage Facility property in 1967. The Willow Street Station portion of the site was occupied by a 2.5 million cubic foot gas holder from about 1911 to 1950.

#### **Division Street Station (SSID: B5FZ)**

The Division Street Station Former MGP site is located at 1241 West Division Street, in Section 5, Township 30 North, Range 14 East, Cook County in the City of Chicago, IL. The site currently encompasses approximately fifteen acres and is bounded to the north by West Division Street, to the south by West Cortez Street, to the west by the Union Pacific Railroad, and to the east and northeast by the North Branch of the Chicago River. The Division Street Station MGP was constructed in 1883 as a gas production and storage facility. This was the first MGP in Chicago built exclusively for the production of water gas. The facility eventually included four gas holders ranging in size from 500,000 to 10 million cubic feet. Underground MGP structures included storage tanks, oil tanks, tar tanks, and tar settling tanks. Above-ground MGP structures included condensers, shaving scrubbers, oil tanks, and light oil washers. Gas production at the plant ended before the aboveground MGP structures were dismantled and removed in 1962.

The portion of the site east of Elston Avenue (adjacent to the North Branch of the Chicago River) is now owned by the City of Chicago and the owner and operator of a bar; during MGP operations, this property was used for coal and coke storage. The portion of the site west of Elston Avenue is currently in use by The Peoples Gas Light and Coke Company (Peoples Gas) as a Utility Service Center and includes a meter testing and repair shop in the main building, a maintenance building, warehouse and storage buildings, material storage bins, office buildings, one 12,000-gallon gasoline underground storage tank (UST), and one 12,000-gallon diesel fuel UST. The site and the surrounding area are zoned for commercial and industrial uses, and the properties adjoining the site are used for commercial purposes. The nearest residential properties are one block south of the site.

#### **Willow Street Station (SSID: B5FY)**

The Willow Street Station Former MGP site is located west of the intersection of Willow Street and North Kingsbury Street in Section 32, Township 40 North, Range 14 East in the City of Chicago, Cook County, Illinois. The site, which is approximately 3.9 acres in size, is no longer owned by The Peoples Gas Light and Coke Company (Peoples Gas). The site is bounded on the west by the North Branch of the Chicago River, on the east by the Chicago, Milwaukee and St. Paul Railroad (which now occupies the right of way formerly occupied by North Kingsbury Street), and on the north by Marcey Properties and to the south by property owned by GI North Property, LLC. Most of the site (approximately 3.3 acres) is owned by GI North Property, LLC and used as a laydown area for steel. The rest of the site (approximately 0.6 acres) is part of the property owned by A. Finkl & Sons Company. The land to the east of the site (across the railroad tracks) is currently owned by Marcey Properties, LLC (Marcey) and occupied by retail businesses. The Marcey property includes parcels formerly owned by Peoples Gas that were parts of the Willow Street MGP site and the Hawthorne Avenue MGP site. Because of their common current ownership, the portion of the Willow Street Station MGP site located east of the railroad is addressed as part of the Hawthorne Avenue Station MGP site.

Ogden Gas Company constructed the original station between 1895 and 1897. A coal gasification plant was operated on-site to produce carbureted water gas. Peoples Gas began leasing the site in 1907 but the facility was shut down from 1910 to 1921. Structures present at the site from about 1910 to 1935 or later included two gas holders (420,000 cubic feet and 100,000 cubic feet), two oil tanks (73,000 gallons and 70,000 gallons), two tar wells, a tar tank (158,000 gallons), a coal shed, a purifying room, hydrometers, generators, and an office. Most of the above-ground structures were dismantled in 1938 and the original gas holders were dismantled in 1944. Portions of the site were leased or sold to other businesses between 1944 and 1953. Peoples Gas constructed a new gas holder (17 million cubic feet) and began distributing natural gas on the site in 1953. The new gas holder was closed in 1972. Since 1988, the site has been owned and managed by the current owners (GI North and A. Finkl & Sons).

#### **South Station MGP (SSID: B5HJ)**

The Throop Street Station Former MGP site is located at the intersection of South Throop Street, South Eleanor Street, and West 25th Street in Section 29, Township 39 North, Range 14 East in Chicago, Cook County, Illinois. The site encompasses approximately 15.5 acres and is bounded to the north by the South Branch of the Chicago River, to the south by South Eleanor Street and West 25th Street, to the west by Loomis Street, and to the east by Commonwealth Edison. The western portion of the site was part of the former South Station but is included in the site because of the common ownership and use. Land use near the site is predominantly industrial and residential. The site is currently owned by Brandenburg Demolition, Inc. (Brandenburg) and is used as a storage yard for equipment and debris. Office buildings, tractor trailers, cranes, construction material, and debris associated with the demolition company are located on-site. Much of the site is covered in crushed rock and gravel. Although environmental conditions at the site have not been thoroughly investigated, surface staining has been observed; this staining may be associated with Brandenburg's operations or with earlier manufactured gas operations.

#### **North Station MGP (SSID: B5HX)**

The North Station Former Manufactured Gas Plant (MGP) site is located in the area bounded by North Crosby, West Division, and West Hobbie Streets and the North Branch Canal (part of the Chicago River system) in Section 4, Township 39 North, Range 14 East in Chicago, Illinois. Land use near the site is mixed residential and industrial/commercial. The former MGP site consists of three parcels totaling approximately 8 acres. One of the parcels (adjacent to the canal

and approximately 1.5 acres in size), which is referred to as the LaSalle Chestnut property, is currently vacant. Another parcel (approximately 5.5 acres) is currently owned by Commonwealth Edison and contains an electrical substation and associated buildings and towers. The third parcel (north of the LaSalle Chestnut property and less than 1 acre in size) is currently used as a storage yard for construction equipment.

The Chicago Gas Light and Coke Company built this facility in 1868 for the production of coal gas. In 1887, production was converted to water gas. The MGP facility was closed in the early 1960s. The primary MGP structures included a 1.5 million cubic foot gas holder, two 500,000 cubic foot relief holders, and a 750,000-gallon oil tank as well as underground oil tanks, tar settling wells, a tar tank, a naphtha tank, tar extractors, oil condensers, pumps and scrubbers, an ash hopper, and various buildings. The parcel adjacent to the North Branch Canal was used for coal storage.

#### **Crawford Station MGP (SSID: B5HK)**

The Crawford Station Former MGP site is located at 3500 South Pulaski Road in Section 34, Township 39 North, Range 13 East in Chicago, Cook County, Illinois. The site is bounded on the south by the Chicago Sanitary and Ship Canal, on the north by the Chicago and Illinois Western Railroad, on the west by the Chicago and Western Indiana Belt Line Railroad, and to the east by Pulaski Road (formerly Crawford Avenue). The former plant site does not include the far northeast corner of this area (approximately 30 acres on the southwest corner of the intersection of Pulaski Road and the Chicago and Illinois Western Railroad), which is occupied by a warehousing and manufacturing facility owned by Lincoln Property Company. Midwest Generation's Crawford Power Plant occupies the property east of Pulaski Road. The properties north of the site (across the railroad tracks) are residential, and the property west of the site is an industrial area containing an Exxon Mobil plant. The site is currently divided into 21 parcels with various owners.

In 1921, the Koppers Company of Pittsburgh and Peoples Gas entered into an agreement whereby Koppers built, financed, and operated a by-product coke plant at the Crawford Station. Peoples Gas bought the gas and coke manufactured at the plant for distribution to consumers. Peoples Gas then acquired the facility in 1928. The site was Peoples' largest facility; it included 105 coke ovens (increased to 151 coke ovens between 1948 and 1950), 9 water gas sets, and two 10 million cubic foot gas holders. By the late 1930s, the Crawford Station produced three types of gas: coke oven gas, carbureted water gas, and reformed natural gas. During the 1930s, several additions and modifications were made to the plant, including construction of a light oil refining plant, addition of liquefied petroleum (LP) gas peak shaving facilities, and conversion of five of the nine water gas sets to produce reformed natural gas and later oil gas. Two more water gas sets were modified to produce reformed natural gas in 1946. Forty LP tanks were installed in 1957. By 1956, the Crawford Station was used only as a peaking unit (supplying gas and coke only when demand was at a peak, usually during the winter months). Production was halted temporarily between 1958 and 1962 and permanently after 1963. The station was retired in 1965. Dismantling of the station began in 1956 starting with portions of the coke oven

plant. The remainder of the station, including the two 10 million cubic feet gas holders, was dismantled in 1965. Peoples Gas sold 146 acres of the site property to First American Realty Company in 1966.

### **Throop Street Station Former MGP (SSID: B5HM)**

The Throop Street Station Former MGP site is located at the intersection of South Throop Street, South Eleanor Street, and West 25<sup>th</sup> Street in Chicago, Illinois. The site encompasses approximately 15.5 acres and is bounded to the north by the South Branch of the Chicago River, to the south by South Eleanor Street and West 25<sup>th</sup> Street, to the west by Loomis Street, and to the east by Commonwealth Edison. Land use near the Throop Street Station is predominantly industrial and residential. The facility was constructed in 1892 by Consumers Gas Company as a gas holder facility and operated until 1972 when it was closed and sold to Brandenburg in 1981. All above ground structures associated with the gas holder facility have been demolished. Limited site investigation activities were conducted in the southwest corner of the site in March 2001 and in June 2002. No subsurface investigation activities have been conducted at the remainder of the site. In the southwest corner of the Throop Street Station, there was the presence of blue-green soils, strong odors, and elevated organic vapor readings in soils. The investigation also revealed the presence of black staining, odors, elevated organic vapor readings, and petroleum sheen on the groundwater surface. Analytical results for soil samples collected in the southwest corner of the Throop Street Station indicated the presence of elevated concentrations of PAHs. No other soil sampling is known to have been conducted at the Throop Street Station and no additional information regarding site-specific soil characteristics is known at this time. Other contaminants likely to be present in the Throop Street Station soils include BTEX, PAHs, metals, and cyanide.

### **Hough Place Station Former MGP (SSID: B5HH)**

Hough Place Station Former MGP Site is located at 2500 S. Corbett St. in Chicago, Illinois within the area bounded on the north by the South Branch of the Chicago River (River) and on the south by railroad property. The MGP operations encompassed approximately 4.5 acres. The MGP site was formerly bordered by two slips that were contiguous to the River: Hough Slip to the east and Evans Slip to the west. These slips were filled in at the time when the MGP operations ceased and the structures were dismantled. The facility produced manufactured gas using five benches with six retorts each and a water gas plant with eight sets. Two holders were constructed at the MGP Property with capacities of 50,000 and 5,000 cubic feet. According to information provided by PGL, the facility also began producing "Pintsch Gas", produced by an oil gas process, for the Pintsch Compressing Company under agreement with the Chicago Gas Company. Pintsch gas was used primarily for compressed gas-powered railway cars. The gas manufacturing process used at this facility resulted in the production of by-products, predominantly coal tars. PGL acquired the Equitable property in 1897 through the Gas Consolidation Act. PGL operated the plant until sometime between 1897 and 1911 (the exact station retirement date is unknown). The station was reportedly dismantled by 1914. At that time, all aboveground gas plant structures were removed. Structures formerly present at the site included the following: a coal shed, a 50,000 cubic foot gas holder; a 5,000 cubic foot gas

holder; a high-pressure gas holder; scrubbers; an oil house; and tar boiling building. The site is currently vacant and is zoned by the City of Chicago for manufacturing. Various site investigations were conducted at the site from 1991 to 2006. In 2006, a time-critical removal action was conducted at the former MGP property, with approximately 9,000 tons of contaminated material disposed off-site. This removal action was completed in 2008. In addition, cleanup actions were performed in other areas of the site (Hough and Evans Slips) which resulted in an additional 27,000 tons of contaminated material being removed/excavated from these areas. On March 15, 2013, the PRP for the site submitted a completion report and work plan to conduct a remedial investigation (RI) of the site, in accordance with the 2008 AOC.

## **GENERAL REQUIREMENTS**

This is a term-form work assignment that requires the contractor to provide oversight of the RI/FS as specified in the settlement agreements issued on October 30, 2008. Successful RI/FS oversight is accomplished by observing and documenting that the PRP has or has not complied with all applicable laws, regulations, and requirements, and has or has not met all performance standards specified in the settlement agreement. The contractor shall furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing the oversight of the RI/FS in accordance with this SOW.

In conducting the work assignment, EPA expects the contractor to propose the most appropriate and cost-effective procedures and methodologies using accepted engineering practices and controls. Throughout the performance of this work assignment, EPA expects the contractor to be responsible for performing services and providing products at the lowest reasonable cost.

A summary of the potential major deliverables and proposed schedule for submittals is in Attachment 1. This summary and schedule can be used as the basis for the contractor's proposed deliverables and schedules included in the work plan.

The contractor shall communicate at least weekly with the EPA contracting officer representative (COR), either in face-to-face meetings or through conference calls.

EPA provides oversight of contractor activities throughout the RI/FS Oversight. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA also reviews deliverables to assess the likelihood that the RI/FS Oversight achieves its goals and that its performance and operations requirements have been met. Acceptance of deliverables by EPA does not relieve the contractor from responsibility for the adequacy of its deliverables or its professional responsibilities.

## **RECORD KEEPING REQUIREMENTS**

The contractor shall maintain all technical and financial records for the RI/FS Oversight in accordance with the contract. The Agency and the contractor shall endeavor to submit documents and deliverables using electronic media whenever possible. At the completion of the work assignment, the contractor shall submit an official record of the RI/FS Oversight in both compact disk and a hardcopy to the COR.

## **US EPA PRIMARY CONTACTS**

The primary contact for this work assignment is Ross del Rosario. He can be reached at (312) 886-6195, via facsimile at (312) 353-1263, or via e-mail at [delrosario.rosauro@epa.gov](mailto:delrosario.rosauro@epa.gov). His mailing address is US EPA Region 5, 77 West Jackson, Chicago, IL 60604 (Mail Code: SR-6J). The secondary contact is Pat Vogtman at (312) 886-9553 or via e-mail at [vogtman.pat@epa.gov](mailto:vogtman.pat@epa.gov). Her mailing address is U.S. EPA Region V, Mailcode: SA-7J, 77 West Jackson Blvd., Chicago IL 60604.

## **WORK ASSIGNMENT COMPLETION DATE AND PROJECT CLOSEOUT**

At the completion of the work assignment, the contractor shall perform all necessary project closeout activities as specified in the contract. These activities include closing out any subcontracts, indexing and consolidating project records and files as required above, and providing a technical and financial closeout report to EPA. The goal is to complete work assignment technical activities and closeout activities by **April 30, 2014**.

### **Task 1 - Project planning and Support**

#### **Task 1.1 - Work Plan**

The contractor shall prepare and submit an RI/FS Oversight work plan that includes a detailed description of implementation activities, performance monitoring, and overall management strategy, including optimization, for the RI/FS Oversight. Typical activities involved in preparing the work plan include, but are not limited to, the following:

- The contractor shall contact the COR within five calendar days after receipt of the work assignment to schedule the kickoff meeting to be held via teleconference with U.S. EPA Region 5.
- If the RI/FS oversight contractor is unfamiliar with the site, the contractor shall review background documents relevant to the RI/FS Oversight as provided by the COR for purposes of the work plan preparation. For budgeting purposes, the contractor shall assume the review of these background documents for two sites.
- If the RI/FS oversight contractor is unfamiliar with the site, the contractor shall conduct a site visit with the COR during the RI/FS Oversight planning phase to assist in developing an understanding of the site and any logistics. For budgeting purposes, the contractor shall assume one site visit shall be conducted.
- The contractor shall prepare the estimated cost to complete the work assignment, including subcontractor costs, for each element of the SOW; providing a breakdown of the cost by task and subtask levels, in accordance with the contract work breakdown structure (WBS). **The contractor shall prepare a Work Plan Revision Request based on Revision No. 2 to the SOW.**
- As needed, the contractor shall attend a Work Plan fact finding/negotiation meeting via teleconference with USEPA. The contractor shall prepare and submit a revised work plan incorporating the agreements made in the fact finding/negotiation meeting.
- The contractor shall provide a conflict of interest disclosure.

#### **Task 1.2 - Review PRP Plans.**

The contractor shall review and provide comments on the following PRP planning documents including, but not limited to PRP Work plans, Health and Safety Plan, Quality Assurance Project Plan (QAPP), Field Sampling Plan (QAPP) and Site Management Plan (SMP). For budgeting purposes, the contractor shall assume the review of site-specific plans for two sites – Crawford Station and Throop Station. For Crawford, there will be a phased approach to approving the RI work plan. This will require multiple work plans to be submitted to EPA. Under Revision No. 1, assume 4 work plans for Crawford Station will be submitted, with 2 revisions per each work plan anticipated. For Throop Station, a completion report and a work plan is expected to be submitted and require review by the contractor. One revision to the completion report and 2 revisions to the work plan are anticipated. For Hough Place, contractor shall review a hybrid completion report/work plan and one revision of the document.

### **Task 1.3- Preparation of Site-Specific Plans.**

The contractor shall prepare a site-specific Health and Safety Plan (HSP) - Specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120(1)(1) and (1)(2).

NOTE: The PRP's HSP may be adopted for use by the oversight contractor, if appropriate. For budgeting purposes, the contractor shall assume the preparation of the HSP for two sites.

### **Task 1.4 - Pollution Liability Insurance**

If the contractor plans to bill insurance premiums as a direct charge to the work assignment and there is no contract-wide Pollution Liability Insurance, the contractor shall prepare and submit costs to the Contracting Officer for approval for work assignment-specific Pollution Liability Insurance. (NOTE: The contractor shall track and report all costs associated with this subtask separately and in accordance with the Reports of Work, Attachment B, of this contract.)

### **Task 1.5 - Project Management and Reporting**

The contractor shall perform activities required to effectively manage the work assignment. The contractor shall provide general work assignment management and coordination to implement the work assignment SOW. The contractor shall prepare monthly progress reports in accordance with the requirements under the contract. The contractor shall manage and track costs and prepare and submit invoices. The contractor shall report costs and level of effort (by P-level) for the reporting period as well as cumulative amounts expended to date

- Specific to Thoop site, the contractor shall participate in progress meetings during the course of the work assignment. For budgeting purposes, the contractor shall assume four (4) meetings, with two (2) people in attendance, for two (2) hours as required plus one hour of meeting prep for each meeting.
- The contractor shall accommodate any external audit or review mechanism as directed by EPA.
- The contractor shall attend EPA-held training as required.
- Add project planning and reporting requirements for Throop Station.
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- Specific to Hough Place, contractor shall assume four (4) meetings, with two (2) people in attendance for two (2) hours as required, plus one hour prep for each meeting.



**Task 1.6 - Subcontractor Procurement and Support Activities     N/A**

**Task 2 - Community Involvement**

This task includes technical support provided by the contractor during public/availability meeting(s) as per Task 13 (Post-RI/FS Support). The contractor shall provide technical support to USEPA for those aspects of the RI/FS scope that require community/public interaction, as needed. For budgeting purposes the contractor shall assume that the contractor will provide technical support at two public/availability meeting(s) with one contractor personnel on attendance.

**Task 3 - Field Investigation/Data Acquisition**

This task involves PRP Field Investigation Oversight related to the PRP Field Investigation. The purpose of the PRP field investigation oversight is to ensure that the PRP field investigation is conducted in accordance with the approved plans prepared under Task 1.

The contractor shall provide technical oversight of PRP activities to ensure the field investigation takes place in accordance with EPA accepted plans and specification, e.g. QAPPs and HSPs. The amount of oversight will be dependent upon the type and complexity of the RI/FS and is at the discretion of the EPA COR. The contractor shall report any non-conformance with the planning documents to the COR. For budgeting purposes, the contractor shall assume three one-day oversight events at each of four sites for a total of 12 events.

With regard to SOW revision No. 1, the contractor shall assume that field oversight at Division, South Station, Crawford, North Station, Willow, Hawthorne, and Throop will be required during this period of performance. For this revision, assume an additional 28 field oversight surveys will be performed by the contractor. For each field oversight event, assume 3 days/event and 12 LOE/day.

- Periodic Reports. The contractor shall provide RI/FS Oversight letter reports PRP's field work within 7 calendar days of field oversight at a specific site. The contractor's oversight reports shall consist of a short summary of significant field events during the period, any photographs taken during the period, and a copy of all field logs.

**Task 5 - Analytical Support and Data Validation (N/A)**

**Task 6 - Data Evaluation**

The contractor shall assist EPA in determining the usability of all data collected. For budgeting purposes, the contractor shall assume this task is appropriate for data collected at four sites, most probable South Station, Division Street, and Willow/Hawthorne. As requested by EPA, the contractor shall conduct data evaluation on a portion (e.g., 10%) of a data package submitted by the PRP to EPA during the remedial investigation. Also, the contractor shall perform any modeling necessary to evaluate the data, as requested by EPA. For budgeting purposes, the contractor shall assume some modeling at three sites.

With regard to SOW revision No. 1, the contractor shall assume 6 additional rounds of data evaluation for North Station, Crawford, Willow/Hawthorne. ■

Specific to Hough Place, contractor shall conduct one round of data evaluation and submit its findings to EPA consistent with previous data evaluations performed on other MGP sites.

**Task 7 - Risk Assessment.** For budgeting purposes, the contractor shall assume the review of the HHRA and the ERA for two sites – South Station and Division Street.

The Baseline Risk Assessment will determine whether site contaminants pose a current or potential risk to human health and the environment in the absence of any remedial action. Four documents are typically submitted under this task, i.e. Screening Human Health Risk Assessment (SLHHRA), Screening Ecological Risk Assessment (SLERA), Human Health Risk Assessment (HHRA) and the Ecological Risk Assessment (ERA). As directed by EPA, the contractor shall review and provide comments on the PRP Risk Assessment submittals.

The contractor shall review the SLHHRA and SLERA and determine whether the deliverables were prepared in accordance with current Superfund HHRA and ERA guidance. Some of these include: (Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments [EPA/540-R-97-006]), and The Role of Screening-Level Risk Assessments and Refining Contaminants of Concern in Baseline Ecological Risk Assessments, ECO Update, [EPA 540/F-01/014]).

If the PRPs have submitted a full-blown HHRA and/or ERA, the contractor shall review these submittals and prepare comments that address the following:

- Hazard Identification (sources). The contractor shall determine whether the HHRA and/or ERA submittal identified the major contaminants of concern and fully characterized the potential adverse and carcinogenic effects. The contractor should evaluate if the appropriate risk assessment guidances were consulted in preparing this step..
- Dose-Response Assessment. The contractor shall determine whether the HHRA and/or ERA appropriately selected the contaminants of concern based on their intrinsic toxicological properties.
- Conceptual Exposure/Pathway Analysis. The contractor shall determine whether the HHRA and/or ERA identified and analyzed the critical exposure pathways (e.g., drinking water). The contractor shall determine whether the HHRA and/or ERA assessed the proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways.
- Characterization of Site and Potential Receptors. The contractor shall determine whether the PRPs' HHRA and/or ERA identified and characterized human populations in the exposure pathways.
- Exposure Assessment. The contractor shall determine whether the exposure assessment identified the following items: 1) the magnitude of actual or potential human exposures; 2) the frequency and duration of these exposures; 3) the routes by which receptors are exposed; 4) an evaluation of the likelihood of such exposures occurring; and the basis for the development of acceptable exposure levels. In developing the exposure assessment, the contractor shall determine whether the submitting author developed central tendency and reasonable maximum estimates of exposure for both current land use conditions and potential land use conditions at the site.

- **Risk Characterization.** The contractor shall determine whether the PRPs' HHRA and/or ERA compared the measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling to chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment. These comparisons determine whether concentrations of contaminants at or near the site are affecting or could potentially affect human health. The characterization should reflect EPA's policy of transparency, clarity, consistency and reasonableness.
- **Identification of Limitations/Uncertainties.** The contractor shall determine whether the the HHRA and/or ERA identified critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.
- **Site Conceptual Model.** The contractor shall determine whether the the HHRA and/or ERA developed a conceptual model of the site based on contaminant identification, exposure assessment, toxicity assessment, and risk characterization.

#### **Task 8 - Treatability Study/Pilot NA**

**Task 9 - Remedial Investigation Report** For budgeting purposes, the contractor shall assume the review of 2 RI Reports – South Station and Division Street.

The contractor shall review the PRP's draft and final Remedial Investigation Report.

- **Review PRP's Draft RI Report.** The contractor shall review and provide comments on the PRP's Draft RI Report within 30 calendar days after receipt of PRP's Draft RI Report.
- **Review PRP's Final RI Report.** The contractor shall review and provide comments on the PRP's Final RI Report to EPA within 30 calendar days after receipt of PRP's Final RI Report.

**Task 10 - Remedial Alternatives Screening** For budgeting purposes, the contractor shall assume the review of two remedial Alternative Screenings. The PRP shall investigate those hazardous waste management alternatives that will remediate or control contaminated media (soil, surface water, ground water, sediments) remaining at the site, as deemed necessary in the RI, to provide adequate protection of human health and the environment. The potential alternatives should encompass, as appropriate, a range of alternatives in which treatment is used to reduce the toxicity, mobility, or volume of wastes but vary in the degree to which long-term management of residuals or untreated waste is required, one or more alternatives involving containment with little or no treatment; and a no-action alternative. Alternatives that involve minimal efforts to reduce potential exposures (e.g., site fencing, deed restrictions) should be presented as "limited action" alternatives. The contractor shall review the PRP's draft and final Technical Memorandum presenting the potential alternatives and determine whether it included the following information:

- **Establishment of Remedial Action Objectives (RAOs).** The contractor shall determine whether the Technical Memorandum specified the PRP's site-specific RAOs which should be developed to protect human health and the environment. The objectives should specify the contaminant(s) and media of concern, the exposure route(s) and receptor(s), and an acceptable contaminant level or range of levels for each exposure route (i.e., preliminary remediation goals).
- **Establishment of General Response Actions.** The contractor shall determine whether the Technical Memorandum proposed general response actions for each medium of interest by defining

contaminant, treatment, excavation, pumping, or other actions, alone or in combination to satisfy the RAOs, taking into account requirements for protectiveness as identified in the RAOs and the chemical and physical characteristics of the site.

- Identification and Screening of Applicable Remedial Technologies. The contractor shall determine whether the Technical Memorandum identifies and screens hazardous waste treatment technologies to ensure that only those technologies applicable to the contaminants present, their physical matrix, and other site characteristics will be considered. This screening will be based primarily on a technology's ability to effectively address the contaminants at the site, but will also take into account a technology's implementability and cost. The contractor shall determine whether the Technical Memorandum's selected representative process options will carry forward into alternative development and whether the memorandum identifies the need for treatability testing for those technologies that are probable candidates for consideration during the detailed analysis.
- The contractor shall determine whether the PRP's Remedial Alternatives are accordance with NCP.
- The contractor shall evaluate the PRP's Remedial Alternatives for Effectiveness, Implementability, and Cost.
- The contractor shall submit it's evaluation of draft and final technical memorandums to EPA within 30 calendar days of receipt of the document.

**Task 11 - Remedial Alternatives Evaluation** For budgeting purposes, the contractor shall assume the review of 2 Remedial Alternative Evaluations – South Station and Division Street.

The contractor shall review the PRP Remedial Alternatives Evaluation Report and assess whether the PRPs have followed evaluation procedures as outlined in the National Contingency Plan (NCP), 40 CFR Part 300 and the Guidance for Conducting RI/FS under CERCLA (OSWER Directive 9355.3-01).

**Task 12 - Feasibility Study Report** For budgeting purposes, the contractor shall assume the review of 2 Feasibility Study Reports – South Station and Division Street.

The Contractor shall review the PRP's Feasibility Study (FS) report to ensure the report is consist with requirements of NCP, settlement agreement, and ARARs, and contains the following components:

- Feasibility Study Objectives.
- Remedial Action Objectives (RAOs).
- General Response Action.
- Screened Remedial Technologies.
- Remedial Alternatives.
- Detail Analysis of Remedial Alternatives.
- Summary and Conclusions.

The contractor shall submit to EPA the results of its review of the FS within 30 calendar days of receipt of the document.

**Task 13 - Post RI/FS Support**

The contractor shall provide support required for preparation of the ROD for the site. The final recommendation contained in the ROD shall represent the opinion and recommendation of EPA, not that of the contractor. Typical activities include, but are not limited to, the following: For budgeting purposes, the contractor shall assume 140 hours for this task,

- Attending public meetings, briefings, public hearings, technical meetings with PRPs.
- Preparing presentation materials.
- Providing technical assistance in the preparation of the Responsiveness Summary.
- Providing technical assistance in the preparation of the Proposed Plan and ROD.
- Preparing Feasibility Study Addendum.

#### **Task 14 - Administrative Record NA**

#### **Task 15 - Work Assignment Closeout**

The contractor shall perform the necessary activities to close out the work assignment in accordance with contract requirements. Typical activities include but are not limited to, the following:

- Package and return documents to the government.
- Duplicating/distribution/storage of files.
- Preparation of the Work Assignment Closeout Report (WACR). The contractor shall prepare the WACR in accordance with Regional guidance or other procedures as specified in the work assignment. In those circumstances where the final hours/budget exceed the approved work plan hours/budget range--plus or minus 20%, the contractor shall provide an explanation for the underage/overage.

**Attachment 1**  
**Submittals for the RI/FS Oversight at**  
**Former Chicago MGP sites**

<b>DELIVERABLE</b>	<b>NO. OF COPIES</b>	<b>DUE DATE (Calendar Days)</b>
Task 1.1 RI/FS Oversight Work Plan	3	30 days after kick-off meeting
Task 1.1 Revised Work Plan	3	15 days after receipt of comments or negotiation meeting
Task 1.1 Conflict of Interest Disclosure	3	Within five days from acceptance of work assignment
Task 1.2 Comments on PRP QAPP, FSP and HASP	2	21 days after receipt of PRP documents
Task 1.3 Health & Safety Plan	2	30 days after work plan approval
Task 1.4 Pollution Liability Insurance		TBD
Task 1.5 Monthly Progress Reports	3	As provided for in the Contract
Task 3 Periodic Reports	2	# days after each sampling event
Task 3 Final Report	2	# days after the end of all field activities
Task 6 Data Evaluation Summary Report	2	45 days after receipt of validated data.
Task 7 Comments on the PRP SLHHRA Letter Report	2	21 days after receipt of comments
Task 7 Comments on the PRP SLERA Letter Report	2	21 days after receipt of comments
Task 7 Comments on the PRP HHRA Report	2	21 days after receipt of comments
Task 7 Comments on the PRP ERA Report	2	21 days after receipt of comments
Task 7 Review of PRP Response to Comments	2	10 days after receipt of comments
Task 9 Comments on PRP draft RI Report	2	30 days after receipt of the PRP draft RI report
Task 9 Review of PRP Response to Comments	2	10 days after receipt of comments
Task 10 Comments on PRP Remedial Alt Screening	2	30 days after receipt of PRP draft Technical Memorandum
Task 10 Review of PRP Response to Comments	2	10 days after receipt of revised PRP Technical Memorandum
Task 11 Comments on PRP Remedial Alt Evaluation	2	30 days after receipt of PRP draft Remedial Alt Evaluation
Task 11 Review of PRP Response to Comments	2	10 days after receipt of comments
Task 12 Comments on the PRP FS Report	2	30 days after receipt of the PRP draft FS report
Task 12 Review of PRP Response to Comments	2	10 days after receipt of comments

Task 15 Work Assignment Completion Report (WACR)	3	45 days after receipt of the Work Assignment Closeout Notification (WACN)
Task 15 Final Costs as documented in WACR	3	90 days after receipt of the WACN

## **Attachment 2 - Regulations and Guidance Documents**

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

1. American National Standards Practices for Respiratory Protection. American National Standards Institute Z88.2-1980, March 11, 1981.
2. ARCS Construction Contract Modification Procedures September 89, OERR Directive 9355.5-01/FS.
3. CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
4. Community Relations in Superfund — A Handbook, U.S. EPA, Office of Emergency and Remedial Response, January 1992, OSWER Directive No. 9230.0-3C.
5. A Compendium of Superfund Field Operations Methods, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
6. Construction Quality Assurance for Hazardous Waste Land Disposal Facilities, U.S. EPA, Office of Solid Waste and Emergency Response, October 1986, OSWER Directive No. 9472.003.
7. Contractor Requirements for the Control and Security of RCRA Confidential Business Information, March 1984.
8. Data Quality Objectives for Remedial Response Activities, U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
9. Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual, U.S. EPA Region IV, Environmental Services Division, April 1, 1986 (revised periodically).
10. EPA NEIC Policies and Procedures Manual, EPA-330/9-78-001-R, May 1978, revised November 1984.
11. Federal Acquisition Regulation, Washington, DC: U.S. Government Printing Office (revised periodically).
12. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3-01.
13. Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potential Responsible Parties, U.S. EPA Office of Emergency and Remedial Response, EPA/540/G-90/001, April 1990.
14. Guidance on Expediting Remedial Design and Remedial Actions, EPA/540/G-90/006, August 1990.
15. Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites, U.S. EPA Office of Emergency and Remedial Response (DRAFT), OSWER Directive No. 9283.1-2.
16. Guide for Conducting Treatability Studies Under CERCLA, U.S. EPA, Office of Emergency and Remedial Response, Prepublication version.
17. Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
18. Health and Safety Requirements of Employees Employed in Field Activities, U.S. EPA, Office of Emergency and Remedial Response, July 12, 1982, EPA Order No. 1440.2.
19. Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements, U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
20. Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.
21. Methods for Evaluating the Attainment of Cleanup Standards: Vol. 1, Soils and Solid Media, February 1989, EPA 23/02-89-042; vol. 2, Ground water (Jul 1992).
22. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.
23. NIOSH Manual of Analytical Methods, 2nd edition. Volumes I-VII for the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
24. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
25. Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.



26. Procedure for Planning and Implementing Off-Site Response Actions, Federal Register, Volume 50, Number 214, November 1985, pages 45933-45937.
27. Procedures for Completion and Deletion of NPL Sites, U.S. EPA, Office of Emergency and Remedial Response, April 1989, OSWER Directive No. 9320.2-3A.
28. EPA requirements for Quality Assurance Project Plans (QA/R-5) EPA/24/B-01/003, March 2001 (reissued May 2006)
29. Contract Laboratory Program Guidance for Field Samplers, August 2004.
30. Data Quality Task Force Uniform Federal Policy (UFP) for Quality Assurance Project Plans, EPA-505-B-04-900A, March 2005.